

# LC1D09Q7

IEC contactor, TeSys Deca, nonreversing, 9A, 5HP at 480VAC, up to 100kA SCCR, 3 phase, 3 NO, 380VAC 50/60Hz coil, open style



## Main

|                                |                                                                                                                                                               |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range of Product               | TeSys Deca                                                                                                                                                    |
| Product or Component Type      | Contactor                                                                                                                                                     |
| Device short name              | LC1D                                                                                                                                                          |
| Contactor application          | Motor control<br>Resistive load                                                                                                                               |
| Utilisation category           | AC-1<br>AC-4<br>AC-3<br>AC-3e                                                                                                                                 |
| Poles description              | 3P                                                                                                                                                            |
| [Ue] rated operational voltage | Power circuit ≤ 690 V AC 25...400 Hz<br>Power circuit ≤ 300 V DC                                                                                              |
| [Ie] rated operational current | 9 A 140 °F (60 °C)) ≤ 440 V AC AC-3 power circuit<br>25 A 140 °F (60 °C)) ≤ 440 V AC AC-1 power circuit<br>9 A 140 °F (60 °C)) ≤ 440 V AC AC-3e power circuit |
| [Uc] control circuit voltage   | 380 V AC 50/60 Hz                                                                                                                                             |

## Complementary

|                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Motor power kW                              | 2.2 kW 220...230 V AC 50/60 Hz AC-3)<br>4 kW 380...400 V AC 50/60 Hz AC-3)<br>4 kW 415...440 V AC 50/60 Hz AC-3)<br>5.5 kW 500 V AC 50/60 Hz AC-3)<br>5.5 kW 660...690 V AC 50/60 Hz AC-3)<br>2.2 kW 400 V AC 50/60 Hz AC-4)<br>2.2 kW 220...230 V AC 50/60 Hz AC-3e)<br>4 kW 380...400 V AC 50/60 Hz AC-3e)<br>4 kW 415...440 V AC 50/60 Hz AC-3e)<br>5.5 kW 500 V AC 50/60 Hz AC-3e)<br>5.5 kW 660...690 V AC 50/60 Hz AC-3e) |
| Maximum Horse Power Rating                  | 1 Hp 230/240 V at AC 50/60 Hz for 1 phase<br>2 Hp 200/208 V at AC 50/60 Hz for 3 phase<br>2 Hp 230/240 V at AC 50/60 Hz for 3 phase<br>5 Hp 460/480 V at AC 50/60 Hz for 3 phase<br>7.5 Hp 575/600 V at AC 50/60 Hz for 3 phase<br>0.33 hp 115 V at AC 50/60 Hz for 1 phase                                                                                                                                                     |
| Compatibility code                          | LC1D                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Pole contact composition                    | 3 NO                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Contact compatibility                       | M2                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Protective cover                            | With                                                                                                                                                                                                                                                                                                                                                                                                                            |
| [Ith] conventional free air thermal current | 25 A 140 °F (60 °C) power circuit<br>10 A 140 °F (60 °C) signalling circuit                                                                                                                                                                                                                                                                                                                                                     |
| Irms rated making capacity                  | 250 A 440 V power circuit IEC 60947<br>140 A AC signalling circuit IEC 60947-5-1<br>250 A DC signalling circuit IEC 60947-5-1                                                                                                                                                                                                                                                                                                   |
| Rated breaking capacity                     | 250 A 440 V power circuit IEC 60947                                                                                                                                                                                                                                                                                                                                                                                             |
| [Icw] rated short-time withstand current    | 105 A 104 °F (40 °C) - 10 s power circuit<br>210 A 104 °F (40 °C) - 1 s power circuit<br>30 A 104 °F (40 °C) - 10 min power circuit<br>61 A 104 °F (40 °C) - 1 min power circuit<br>100 A - 1 s signalling circuit<br>120 A - 500 ms signalling circuit<br>140 A - 100 ms signalling circuit                                                                                                                                    |

|                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Associated fuse rating                 | 10 A gG signalling circuit IEC 60947-5-1<br>25 A gG ≤ 690 V type 1 power circuit<br>20 A gG ≤ 690 V type 2 power circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Average impedance                      | 2.5 mOhm - lth 25 A 50 Hz power circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Power dissipation per pole             | 1.56 W AC-1<br>0.2 W AC-3<br>0.2 W AC-3e                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| [Ui] rated insulation voltage          | Power circuit 690 V IEC 60947-4-1<br>Power circuit 600 V CSA<br>Power circuit 600 V UL<br>Signalling circuit 690 V IEC 60947-1<br>Signalling circuit 600 V CSA<br>Signalling circuit 600 V UL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Overvoltage category                   | III                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Pollution degree                       | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| [Uimp] rated impulse withstand voltage | 6 kV IEC 60947                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Safety reliability level               | B10d = 1369863 cycles contactor with nominal load EN/ISO 13849-1<br>B10d = 20000000 cycles contactor with mechanical load EN/ISO 13849-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Mechanical durability                  | 15 Mcycles                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Electrical durability                  | 0.6 Mcycles 25 A AC-1 ≤ 440 V<br>2 Mcycles 9 A AC-3 ≤ 440 V<br>2 Mcycles 9 A AC-3e ≤ 440 V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Control circuit type                   | AC 50/60 Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Coil technology                        | Without built-in suppressor module                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Control circuit voltage limits         | 0.3...0.6 Uc -40...158 °F (-40...70 °C) drop-out AC 50/60 Hz<br>0.8...1.1 Uc -40...140 °F (-40...60 °C) operational AC 50 Hz<br>0.85...1.1 Uc -40...140 °F (-40...60 °C) operational AC 60 Hz<br>1...1.1 Uc 140...158 °F (60...70 °C) operational AC 50/60 Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Inrush power in VA                     | 70 VA 60 Hz 0.75 68 °F (20 °C))<br>70 VA 50 Hz 0.75 68 °F (20 °C))                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Hold-in power consumption in VA        | 7.5 VA 60 Hz 0.3 68 °F (20 °C))<br>7 VA 50 Hz 0.3 68 °F (20 °C))                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Heat dissipation                       | 2...3 W 50/60 Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Operating time                         | 12...22 ms closing<br>4...19 ms opening                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Maximum operating rate                 | 3600 cyc/h 140 °F (60 °C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Connections - terminals                | Power circuit screw clamp terminals 1 0.00...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> ) flexible without cable end<br>Power circuit screw clamp terminals 2 0.00...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> ) flexible without cable end<br>Power circuit screw clamp terminals 1 0.00...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> ) flexible with cable end<br>Power circuit screw clamp terminals 2 0.00...0.00 in <sup>2</sup> (1...2.5 mm <sup>2</sup> ) flexible with cable end<br>Power circuit screw clamp terminals 1 0.00...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> ) solid without cable end<br>Power circuit screw clamp terminals 2 0.00...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> ) solid without cable end<br>Control circuit screw clamp terminals 1 0.00...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> ) flexible without cable end<br>Control circuit screw clamp terminals 2 0.00...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> ) flexible without cable end<br>Control circuit screw clamp terminals 1 0.00...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> ) flexible with cable end<br>Control circuit screw clamp terminals 2 0.00...0.00 in <sup>2</sup> (1...2.5 mm <sup>2</sup> ) flexible with cable end<br>Control circuit screw clamp terminals 1 0.00...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> ) solid without cable end<br>Control circuit screw clamp terminals 2 0.00...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> ) solid without cable end |
| Tightening torque                      | Power circuit 15.05 lbf.in (1.7 N.m) screw clamp terminals flat Ø 6 mm<br>Power circuit 15.05 lbf.in (1.7 N.m) screw clamp terminals Philips No 2<br>Control circuit 15.05 lbf.in (1.7 N.m) screw clamp terminals flat Ø 6 mm<br>Control circuit 15.05 lbf.in (1.7 N.m) screw clamp terminals Philips No 2<br>Control circuit 15.05 lbf.in (1.7 N.m) screw clamp terminals pozidriv No 2<br>Power circuit 15.05 lbf.in (1.7 N.m) screw clamp terminals pozidriv No 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Auxiliary contact composition          | 1 NO + 1 NC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Auxiliary contacts type                | Mechanically linked 1 NO + 1 NC IEC 60947-5-1<br>Mirror contact 1 NC IEC 60947-4-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Signalling circuit frequency           | 25...400 Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

|                           |                                                                                                         |
|---------------------------|---------------------------------------------------------------------------------------------------------|
| Minimum switching voltage | 17 V signalling circuit                                                                                 |
| Minimum switching current | 5 mA signalling circuit                                                                                 |
| Insulation resistance     | > 10 MOhm signalling circuit                                                                            |
| Non-overlap time          | 1.5 Ms on de-energisation between NC and NO contact<br>1.5 ms on energisation between NC and NO contact |
| Mounting Support          | Plate<br>Rail                                                                                           |

## Environment

|                                                       |                                                                                                                                                                                    |
|-------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Standards                                             | CSA C22.2 No 14<br>EN 60947-4-1<br>EN 60947-5-1<br>IEC 60947-4-1<br>IEC 60947-5-1<br>UL 508<br>IEC 60335-1                                                                         |
| Product Certifications                                | UL<br>CSA<br>DNV<br>GL<br>RINA<br>CCC<br>BV<br>GOST<br>LROS (Lloyds register of shipping)<br>UKCA                                                                                  |
| IP degree of protection                               | IP20 front face IEC 60529                                                                                                                                                          |
| Protective treatment                                  | THIEC 60068-2-30                                                                                                                                                                   |
| Climatic withstand                                    | IACS E10 exposure to damp heat<br>IEC 60947-1 Annex Q category D exposure to damp heat                                                                                             |
| Permissible ambient air temperature around the device | -40...140 °F (-40...60 °C)<br>140...158 °F (60...70 °C) with derating                                                                                                              |
| Operating altitude                                    | 0...9842.52 ft (0...3000 m)                                                                                                                                                        |
| Fire resistance                                       | 1562 °F (850 °C) IEC 60695-2-1                                                                                                                                                     |
| Flame retardance                                      | V1 conforming to UL 94                                                                                                                                                             |
| Mechanical robustness                                 | Vibrations contactor open 2 Gn, 5...300 Hz)<br>Vibrations contactor closed 4 Gn, 5...300 Hz)<br>Shocks contactor open 10 Gn for 11 ms)<br>Shocks contactor closed 15 Gn for 11 ms) |
| Height                                                | 3.03 in (77 mm)                                                                                                                                                                    |
| Width                                                 | 1.77 in (45 mm)                                                                                                                                                                    |
| Depth                                                 | 3.39 in (86 mm)                                                                                                                                                                    |
| Net Weight                                            | 0.71 lb(US) (0.32 kg)                                                                                                                                                              |

## Ordering and shipping details

|                   |                                    |
|-------------------|------------------------------------|
| Category          | 22354-CTR, TESYS D, OPEN, 9-38A AC |
| Discount Schedule | I12                                |
| GTIN              | 3389110349092                      |
| Returnability     | No                                 |
| Country of origin | FR                                 |

## Packing Units

|                              |                   |
|------------------------------|-------------------|
| Unit Type of Package 1       | PCE               |
| Number of Units in Package 1 | 1                 |
| Package 1 Height             | 1.97 in (5 cm)    |
| Package 1 Width              | 3.62 in (9.2 cm)  |
| Package 1 Length             | 4.41 in (11.2 cm) |
| Package 1 Weight             | 12.28 oz (348 g)  |
| Unit Type of Package 2       | S02               |
| Number of Units in Package 2 | 20                |
| Package 2 Height             | 5.91 in (15 cm)   |
| Package 2 Width              | 11.81 in (30 cm)  |

|                              |                         |
|------------------------------|-------------------------|
| Package 2 Length             | 15.75 in (40 cm)        |
| Package 2 Weight             | 16.44 lb(US) (7.455 kg) |
| Unit Type of Package 3       | P06                     |
| Number of Units in Package 3 | 160                     |
| Package 3 Height             | 30.31 in (77 cm)        |
| Package 3 Width              | 31.50 in (80 cm)        |
| Package 3 Length             | 23.62 in (60 cm)        |
| Package 3 Weight             | 150.58 lb(US) (68.3 kg) |

### Offer Sustainability

|                            |                                                                                                                                                                                                                                                           |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sustainable offer status   | Green Premium product                                                                                                                                                                                                                                     |
| California proposition 65  | WARNING: This product can expose you to chemicals including: Antimony oxide & Antimony trioxide, which is known to the State of California to cause cancer. For more information go to <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a> |
| REACH Regulation           | <a href="#">REACH Declaration</a>                                                                                                                                                                                                                         |
| REACH free of SVHC         | Yes                                                                                                                                                                                                                                                       |
| EU RoHS Directive          | Compliant <a href="#">EU RoHS Declaration</a>                                                                                                                                                                                                             |
| Toxic heavy metal free     | Yes                                                                                                                                                                                                                                                       |
| Mercury free               | Yes                                                                                                                                                                                                                                                       |
| China RoHS Regulation      | <a href="#">China RoHS Declaration</a>                                                                                                                                                                                                                    |
| RoHS exemption information | <a href="#">Yes</a>                                                                                                                                                                                                                                       |
| Environmental Disclosure   | <a href="#">Product Environmental Profile</a>                                                                                                                                                                                                             |
| Circularity Profile        | <a href="#">End Of Life Information</a>                                                                                                                                                                                                                   |
| WEEE                       | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.                                                                                                                              |
| PVC free                   | Yes                                                                                                                                                                                                                                                       |

### Contractual warranty

|          |           |
|----------|-----------|
| Warranty | 18 months |
|----------|-----------|